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(54) Title: SYSTEM AND METHOD FOR EXPRESSION PROTEOMICS BASED ON ISOTOPE RATIO MODIFICATION

(57) Abstract: The present invention relates to modification of isotope ratios in peptides and polypeptides as an alternative to full isotopic exchange for coding in proteomics. Subtle modification of isotope ratio does not compromise protein identification experiments and can thus provide elemental composition data for accurate isotope ratio decoding. Application of subtle modification of isotope ratio proteomics (SMIRP) offers a convenient approach to in vivo isotope coding.